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10/551,185	09/29/2005	Snjezana Boger	016906-0432	1855
22428	7590	12/28/2009	EXAMINER	
FOLEY AND LARDNER LLP			WEDDLE, ALEXANDER MARION	
SUITE 500			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,185	Applicant(s) BOGER ET AL.
	Examiner ALEXANDER WEDDLE	Art Unit 1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 28 September 2009.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1 and 10-32 is/are pending in the application.
 4a) Of the above claim(s) 22-24, 26 and 27 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,10-21,25 and 28-32 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) 1 and 10-32 are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 09/28/2009.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 28, 2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim as originally filed recited "in which the CAB flux, the ammonium salt or the potassium fluoride *is in a phase* with an alkaline pH;

the claim as amended recites that *the CAB flux itself* has an alkaline pH. There is no support for this limitation in the specification (see specification, par. 0022).

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 11, 13, 17, 19, 21, 25, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 1, 11, 17, 19, 21, and 31, the phrase "and/or" is indefinite because it is not clear whether both limitations are required or only one. Examiner interprets the claim as "or" since the broadest reasonable interpretation would require only one of the limitations.

Regarding Claim 11, the phrases "such as," "for example," and "or the like" render the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding Claim 13, pH is a measure of the acidity or alkalinity of a solution not of a compound, which is apparently what the CAB flux is (see specification, par. 0022). Therefore the Claim is indefinite, because it is unclear how the pH of *the CAB flux itself*, not that of a solution which comprises the CAB flux, is determined. Examiner will interpret the claim to mean an alkaline CAB flux.

Regarding Claim 25, the phrase "carried out together" renders the claim indefinite because the word "together" has multiple reasonable meanings ("simultaneously," "in succession" or "by combined action" (see, for example, <http://www.merriam-webster.com/dictionary/together>). Examiner will interpret the claim to mean either simultaneously or in succession.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1, 10-18, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jankosky et al. (US 2004/0229071).

Regarding Claims 1, 10, 12, 28, Jankosky et al. (US'071) teach a method for producing surface-modified workpieces made from a metal or metal alloy, comprising the steps of providing the workpiece which is to be modified; treating the workpiece by spraying at least one modifying agent, which is at a temperature of 10 to 50 degrees Celsius and which comprises at least one modifying agent comprising a metal salt in aqueous phase and with a pH of between 6 and 8, of an element from one of transition groups I to VI of the periodic table of elements, a compound of an element from non-transition groups V-VIII of the periodic table, a controlled atmosphere brazing (CAB) flux at least to obtain the surface-modified workpiece. The modifying agent may comprise the metal salt and CAB flux, potassium aluminum hexafluoride ("potassium hexafluoroaluminate") (abstract; p. 4, Table 1; pars. 0023-0029).

US'071 further teaches that the coated workpiece is heated to between about 400 to about 600 degrees (par. 0006), but fails to teach providing the workpiece at that temperature. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the process of US'491 by providing the workpiece at the recited temperatures in order to cause the resin-infused modifying agent to melt and

adhere to the workpiece suddenly and thoroughly with a reasonable expectation of success.

Regarding Claim 11, the modifying agent may comprise ammonium fluoride (p. 4, Table 1).

Regarding Claim 13, Examiner considers that the disclosed CAB flux potassium aluminum hexafluoride is inherently alkaline.

Regarding Claim 14, US'071 teaches that the modifying agent may comprise water (par. 0029). US'071 is silent as to whether the water is deionized or distilled water. It is well-known in the art to use distilled or deionized water and would have been used by the person of ordinary skill in the art at the time of invention with a reasonable expectation of success.

Regarding Claims 15-16, US'071 teaches that the step of treating may comprise a conventional coating method such as spraying, immersing, or other (par. 0030).

Regarding Claim 17, US'071 teaches that one or a combination of metal salt, CAB flux, ammonium fluoride, or potassium fluoride are used in a polymeric matrix to treat the workpiece (0030-0031).

Regarding Claim 18, the matrix may comprise organic or inorganic solvent (par. 0029).

Regarding Claims 29-30, Claim 17 from which Claim 29 depends was rejected is based on the presence of a component other than a crosslinkable compound, which is interpreted as connected by an "or" to the other components, and thus not required by the language of the claim.

11. Claims 19-21, 25, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jankosky et al. (US 2004/0229071) as applied to claims 1 and 17 above, and further in view of Kojima et al. (EP 1,154,042).

12. Regarding Claims 19, 21, and 31, US'071 suggests that the metal salt, CAB flux, or organometal would be within the recited concentration (par. 0026). US'071 fails to teach the narrower range. EP'042 suggests that a corrosion-resistant organometal may be added within the recited concentration range. It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the process of US'071 by adding a corrosion inhibitor, because EP'042 teaches that aluminum workpieces benefit from such inhibitors and US'071 suggests that corrosion resistance is an aim of the process (par. 0004). Furthermore, it would have been obvious to a person of ordinary skill in the art at the time of invention to modify the process of US'071 by adding a recited component within the recited range, because EP'042 suggests that the recited concentration would provide aluminum alloy with adequate corrosion resistance.

Regarding Claims 20 and 32, US'071 is silent as to heat exchanger. EP'042 teaches a similar process to treat brazed heat exchangers comprising aluminum or aluminum alloy workpieces (Claim 8). It would have been obvious to a person of ordinary skill in the art at the time of invention to practice the process of US'071 with a CAB brazed heat exchanger, because EP'042 suggests that heat exchangers made from aluminum would benefit from the surface protection provided by EP'042, including higher corrosion resistance.

Regarding Claim 21, US'071 discloses that it is known to treat aluminum alloys with a corrosion inhibitor (par. 0003) and suggests minimizing corrosion, but is silent as to including a corrosion inhibitor. EP'042 teaches adding to the modifying agent a biocidal agent or a corrosion inhibitor (par. 0021). It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the process of US'071 by adding a corrosion inhibitor, because EP'042 teaches that aluminum workpieces benefit from such inhibitors and US'071 suggests that corrosion resistance is an aim of the process.

Regarding Claim 25, US'071 is silent as to joining workpieces. EP'042 teaches that workpieces, particularly of a heat exchanger, may be cohesively joined by brazing or soldering, for example (par. 0008). It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the process of US'071 by surface modifying the metal surface of workpieces cohesively joined, because EP'042 teaches that heat exchangers which may benefit from the process as argued above may be comprised of cohesively joined metal workpieces.

Further, the combination of references is silent as to carrying out the step of joining the workpieces while surface-modifying at least one of the workpieces. It would have been within the skill of a person of ordinary skill in the art at the time of invention to join the workpieces, such as by brazing or welding, (which by the way may provide the requisite heat) while surface modifying one of the joined workpieces to produce a brazed workpiece, such as a heat exchanger, more quickly.

Double Patenting

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1, 10-19, 21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 4-6, 17, 19-32 of copending Application No. 11/576,918. Although the conflicting claims are not identical, they are not patentably distinct from each other because copending Application claims a method for coating a workpiece made from aluminum, copper and/or magnesium by a method of flooding or spraying, with the workpiece within the range of this application, including the same concentrations, similar modifying agent(s), within the claimed. The differences between the claims arise from possible combinations of the features of the separate claims, such as combining the components in Claims 15 with the components of 16. It would have been obvious to a person of ordinary skill in

the art at the time of invention to practice the invention by mixing the particles of Claim 15 with the salts of Claim 16 in order to make a mixture conferring surface protection of the claimed workpieces. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

15. No Claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER WEDDLE whose telephone number is (571) 270-5346. The examiner can normally be reached on Monday-Thursday, 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571)272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. W./
Examiner, Art Unit 1792
/Michael Kornakov/
Supervisory Patent Examiner, Art Unit 1792